



Bring Your Web Animations

To The Next Level

Deep Dive Into Web Animations With ING Interface Examples

Vlad Stawizki @ ING - 04.07.2024



do your thing

About Me

Vlad Stawizki

- Frontend Expert
- Frontend Support for other Teams
- 10+ Years Frontend Exp



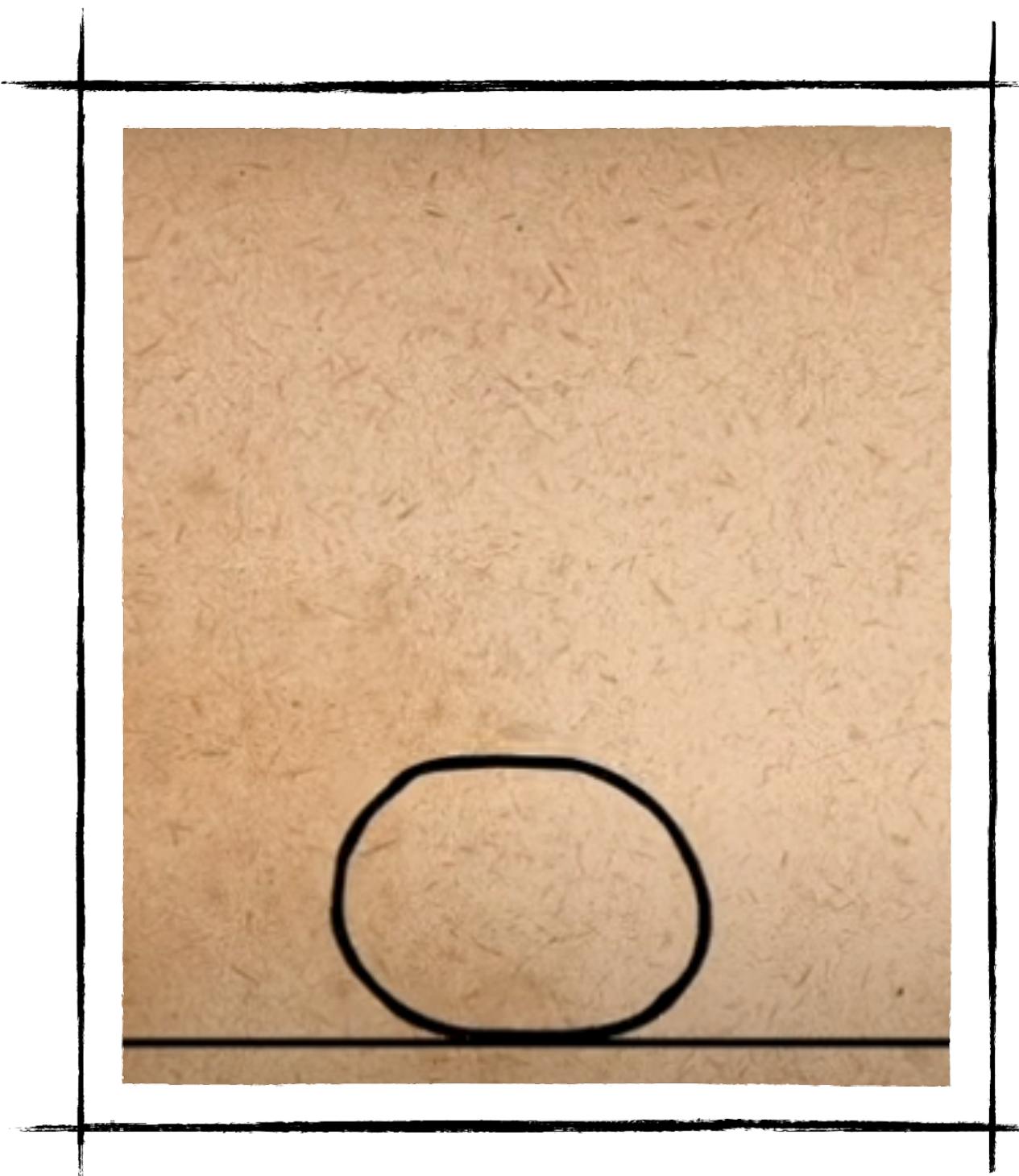
Motivation



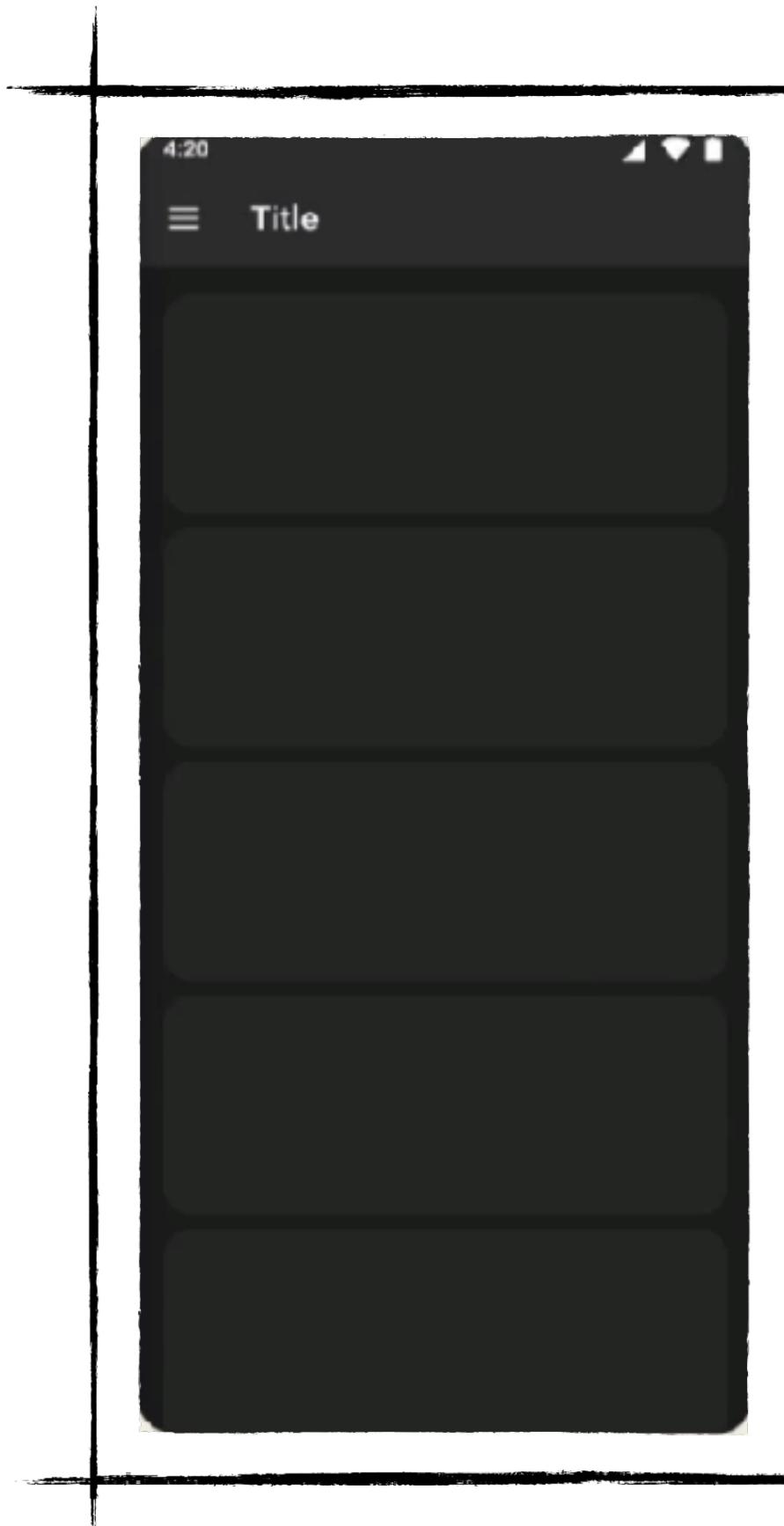
The Unmistakably
Original® Design Studio

Motivation

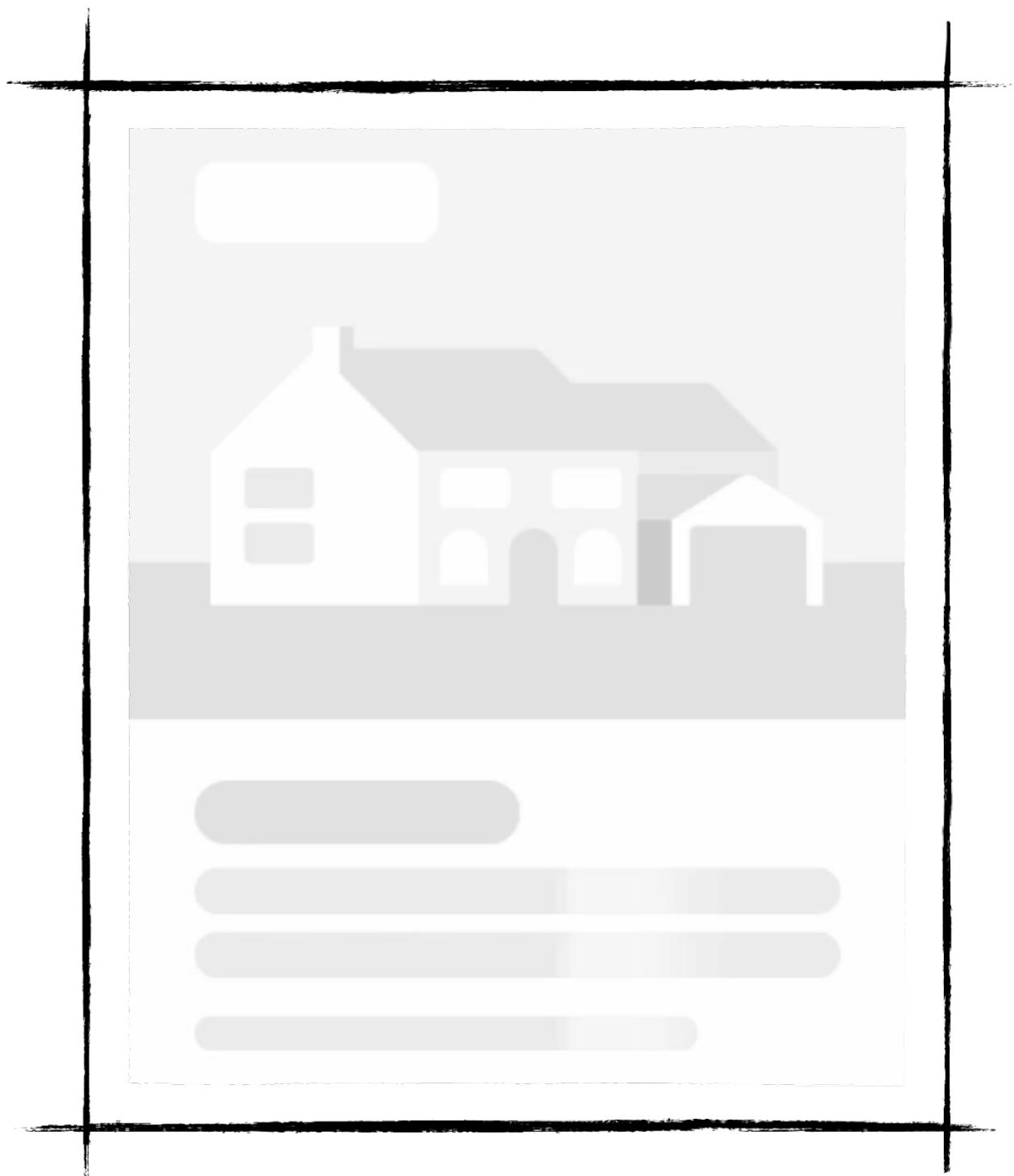
Why do we need animated interfaces?



provide context



real world reference



clear feedback

Types of Animations

Eye Catcher



Girokonto

Kostenloses
Gehaltskonto + 50 €



Sparen & Anlegen

Extra-Konto mit 3,3% +
Wertpapier-Depots



Wertpapierhandel

Wertpapiere kaufen
und verkaufen



Kredite

von 2.500 bis 75.000
Euro



Baufinanzierung

Ab in die eigenen vier
Wände

Feedback



Your email

Navigation



Empfehlenswert: unsere
ausgezeichneten Kredite



Unkompliziert und tolles Angebot

„Alles sehr unkompliziert. Schnelle Auszahlung.
Konditionen sind Top“



Aus einer Befragung in 2023

How to build animations

Tools

Ways to implement animations for web interfaces



Tools

Ways to implement animations for web interfaces

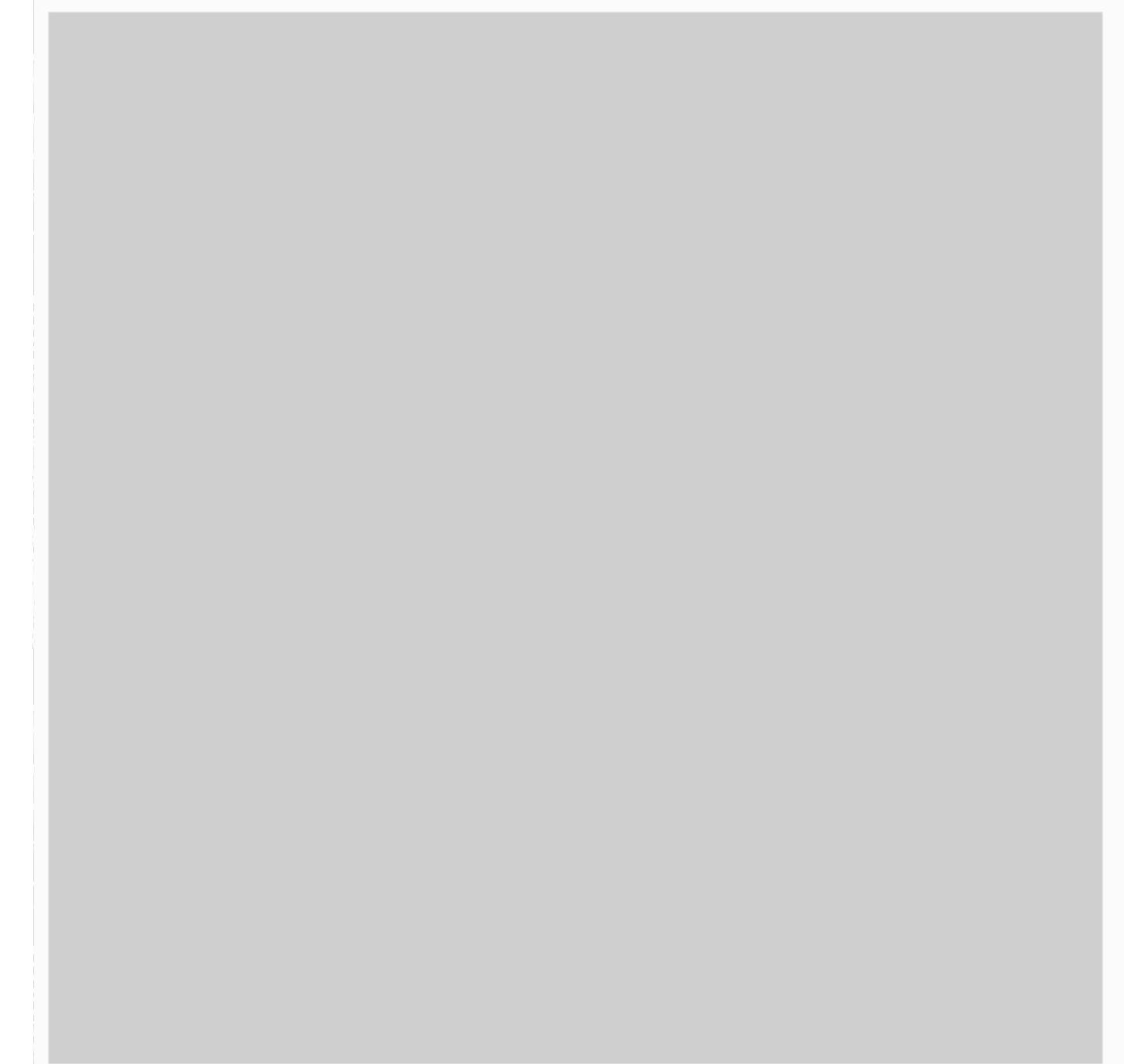


CSS Animations

Transition

```
1 <div class="container pending">  
2     
3 </div>
```

```
1 .container.pending > img {  
2   opacity: 0;  
3 }  
4  
5 .container > img {  
6   opacity: 1;  
7   transition: opacity 500ms ease;  
8 }
```



Miau

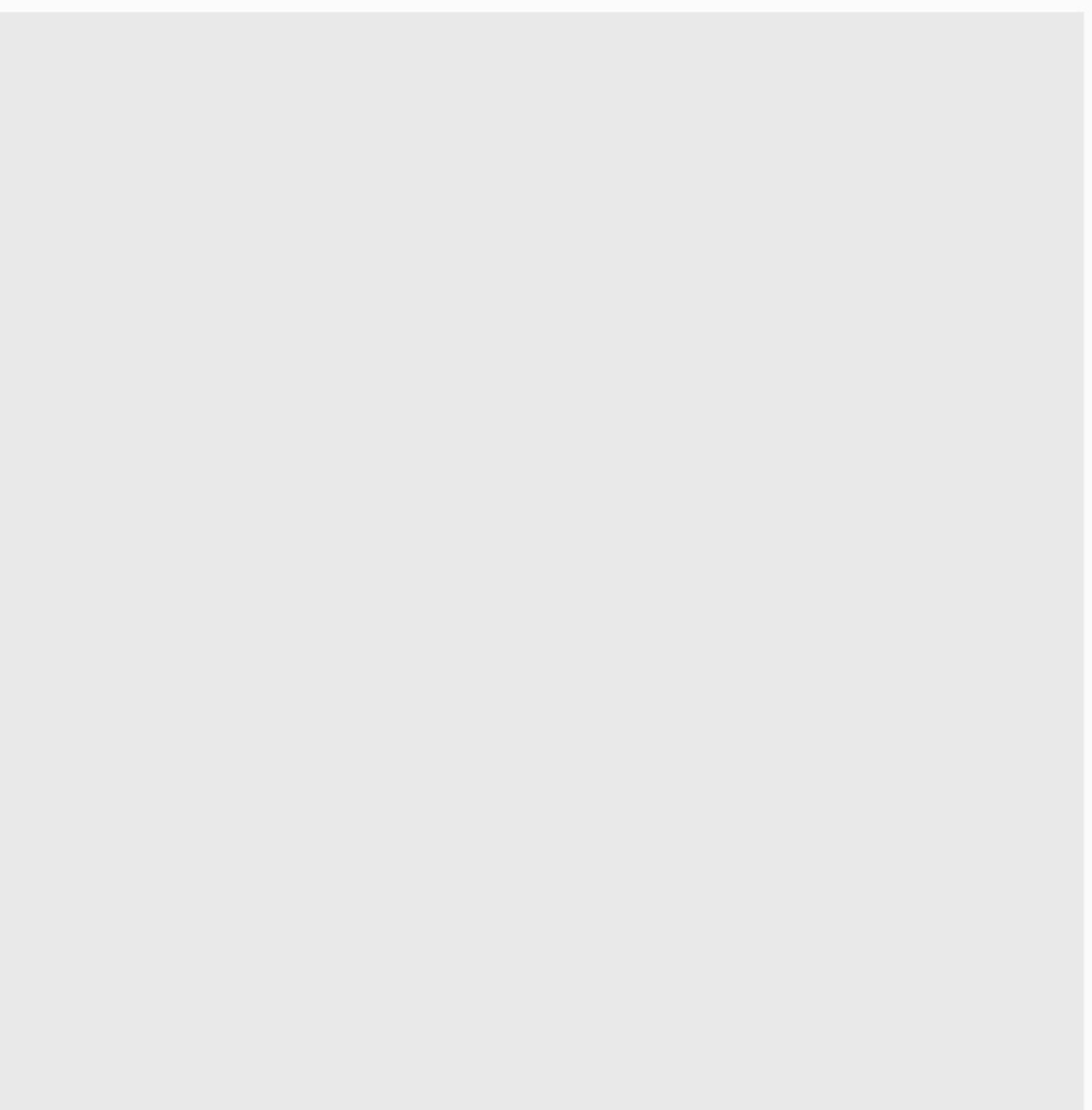
When I want in, I want in now!

- Garfield

Animate & Keyframes

```
1 <div class="container pending">  
2     
3 </div>
```

```
1 .container.pending > img {  
2   opacity: 0;  
3 }  
4  
5 .container {  
6   width: 640px;  
7   background-color: #ececfc;  
8   animation: pending 700ms ease 10;  
9 }
```



Miau

When I want in, I want in now!

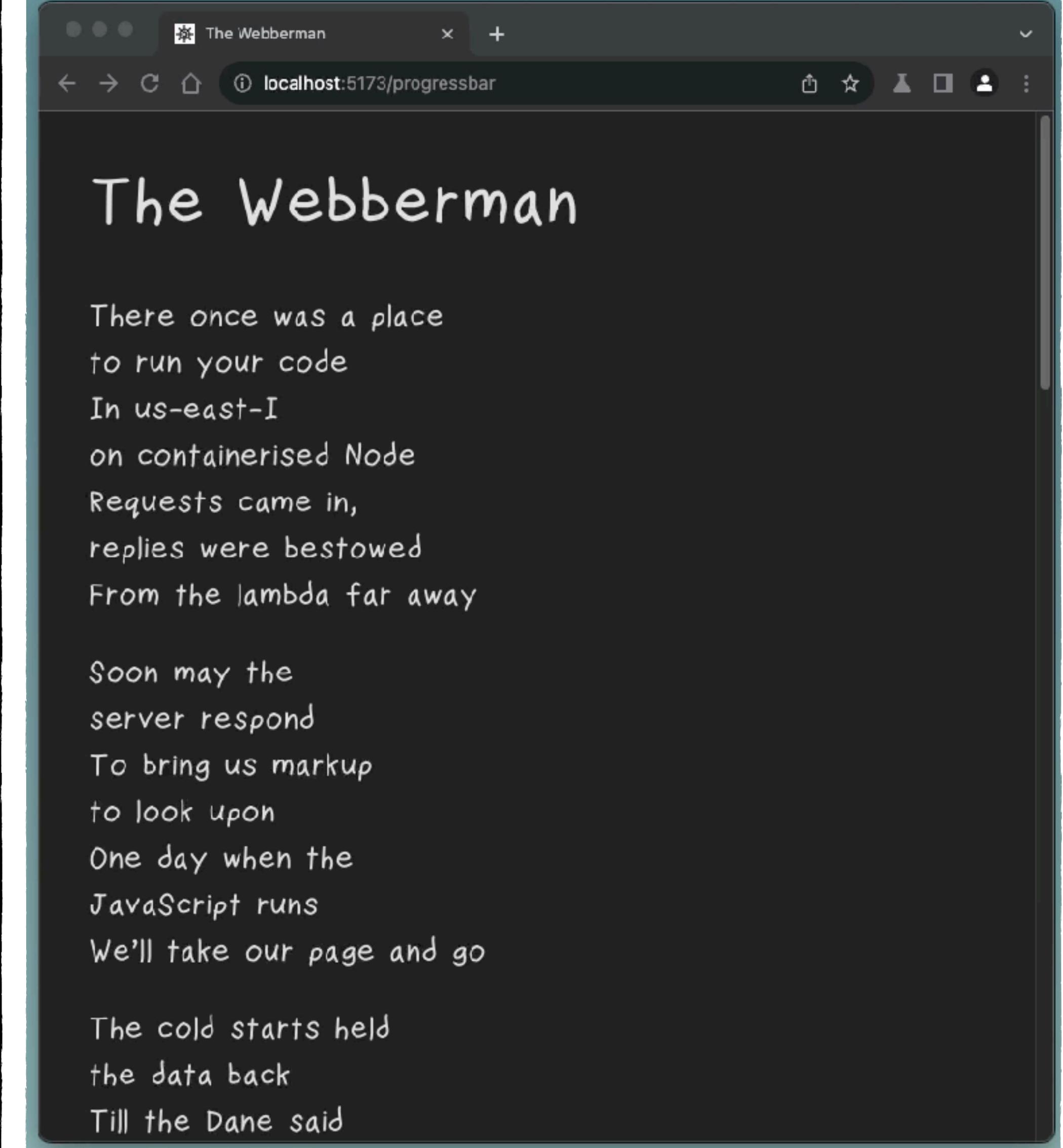
- Garfield

Animate & Keyframes

```
1 @keyframes pending {  
2   0% { background-color: #ececfc; }  
3   50% { background-color: #d8d8d8; }  
4   100% { background-color: #ececfc; }  
5 }
```

```
1 div {  
2   animation: example 5s linear 2s infinite alternate;  
3 }  
4  
5 div {  
6   animation-name: example;  
7   animation-duration: 5s;  
8   animation-timing-function: linear;  
9   animation-delay: 2s;  
10  animation-iteration-count: infinite;  
11  animation-direction: alternate;  
12 }
```

Animation Timeline



Animation Timeline

```
1 <body>
2   <div id="progressbar"></div>
3   <main> ... </main>
4 </body>
```

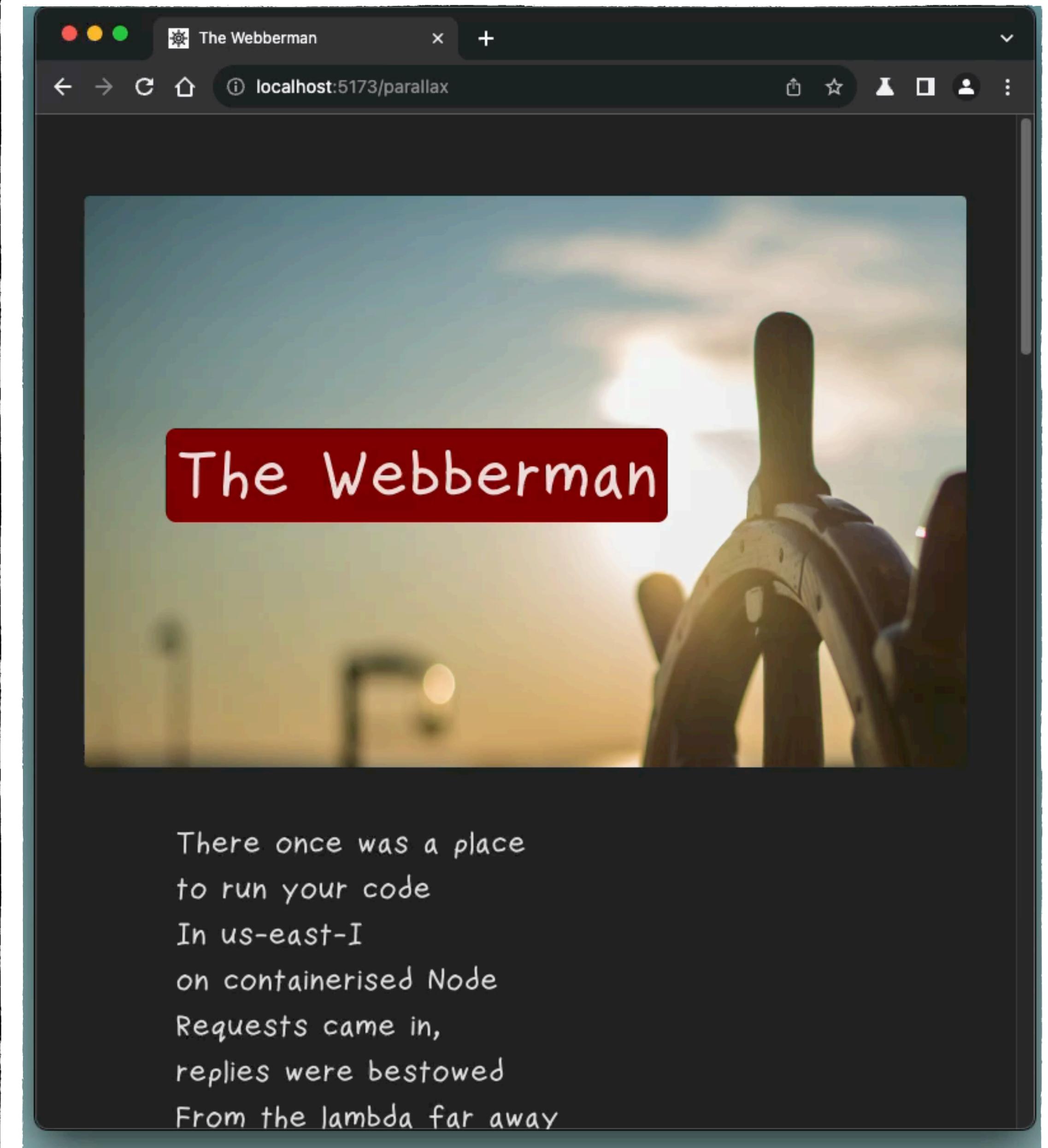
```
1 #progressbar {
2   position: fixed;
3   top: 0;
4   left: 0;
5   right: 0;
6   height: 1em;
7   background-color:#FF6200;
8   transform-origin: 0 50%;
9   animation: 1s linear forwards adjust-progressbar;
10
11
12 }
13
14 @keyframes adjust-progressbar {
15   from { transform: scaleX(0) }
16   to { transform: scaleX(1) }
17 }
18
```

Animation Timeline

```
1 <body>
2   <div id="progressbar"></div>
3   <main> ... </main>
4 </body>
```

```
1 #progressbar {
2   position: fixed;
3   top: 0;
4   left: 0;
5   right: 0;
6   height: 1em;
7   background-color:#FF6200;
8   transform-origin: 0 50%;
9   animation: 1s linear forwards adjust-progressbar;
10
11   animation-timeline: scroll(block nearest);
12 }
13
14 @keyframes adjust-progressbar {
15   from { transform: scaleX(0) }
16   to { transform: scaleX(1) }
17 }
18
```

Animation Timeline



Animation Timeline

```
1 <section class="hero">
2   <div class="hero__body">
3     
4     <div class="hero__header">
5       <h1><span>The Webberman</span></h1>
6     </div>
7   </div>
8 </section>
```

```
1 @keyframes parallax {
2   from { transform: translateY(-5%); }
3
4   to { transform: translateY(-200%); }
5 }
6
7 @keyframes parallaxInverse {
8   from { transform: translateY(150px); }
9
10  to { transform: translateY(1000px); }
11 }
```

```
1 .hero__body img {
2   will-change: transform;
3   animation: 1s linear forwards parallax;
4
5 }
6
7 .hero__header {
8   position: absolute;
9   top: 0;
10  left: 64px;
11  width: 100%;
12  text-align: left;
13  will-change: transform;
14  animation: 1s linear forwards parallaxInverse;
15
16
17
18 }
```

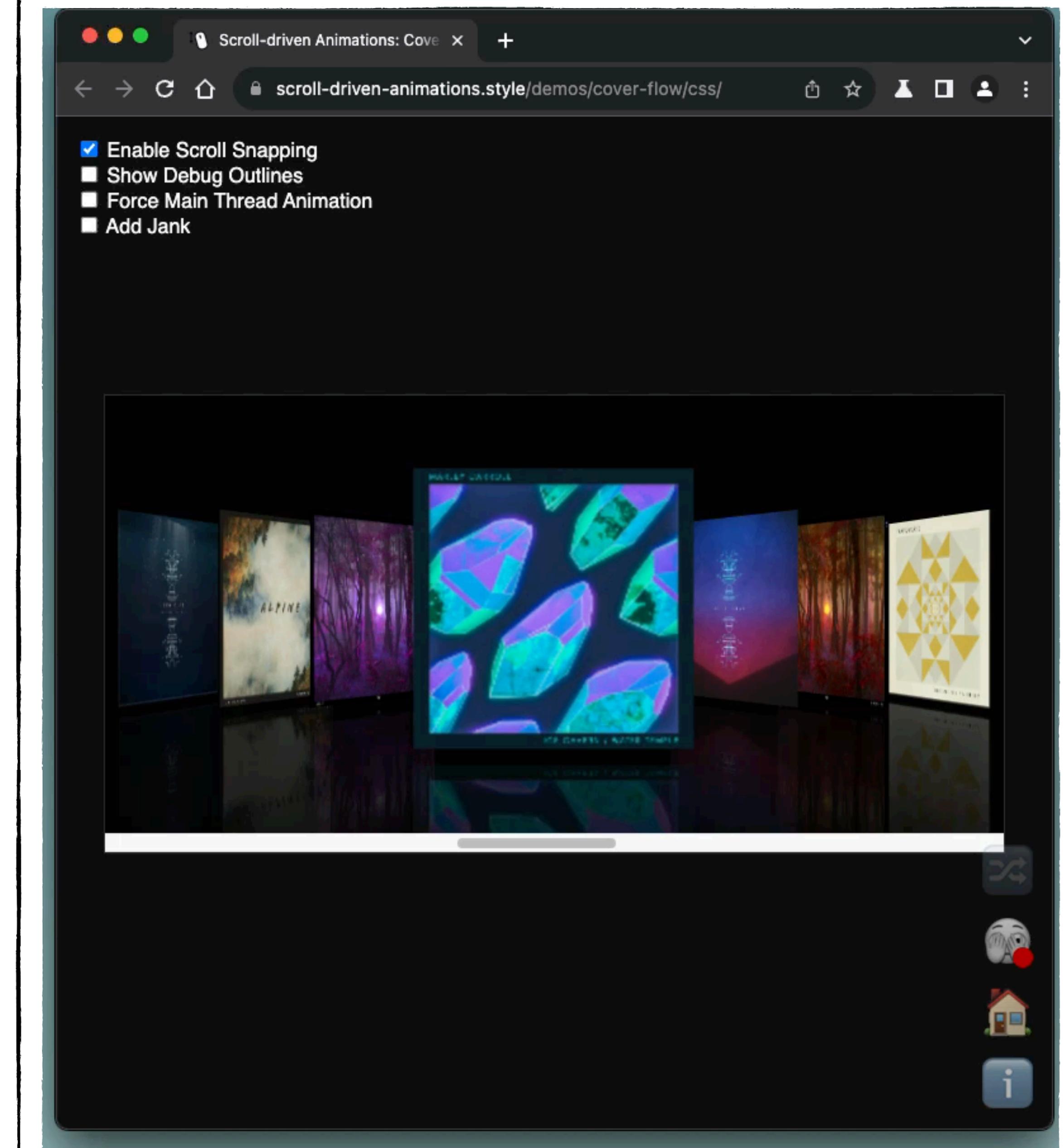
Animation Timeline

```
1 <section class="hero">
2   <div class="hero__body">
3     
4     <div class="hero__header">
5       <h1><span>The Webberman</span></h1>
6     </div>
7   </div>
8 </section>
```

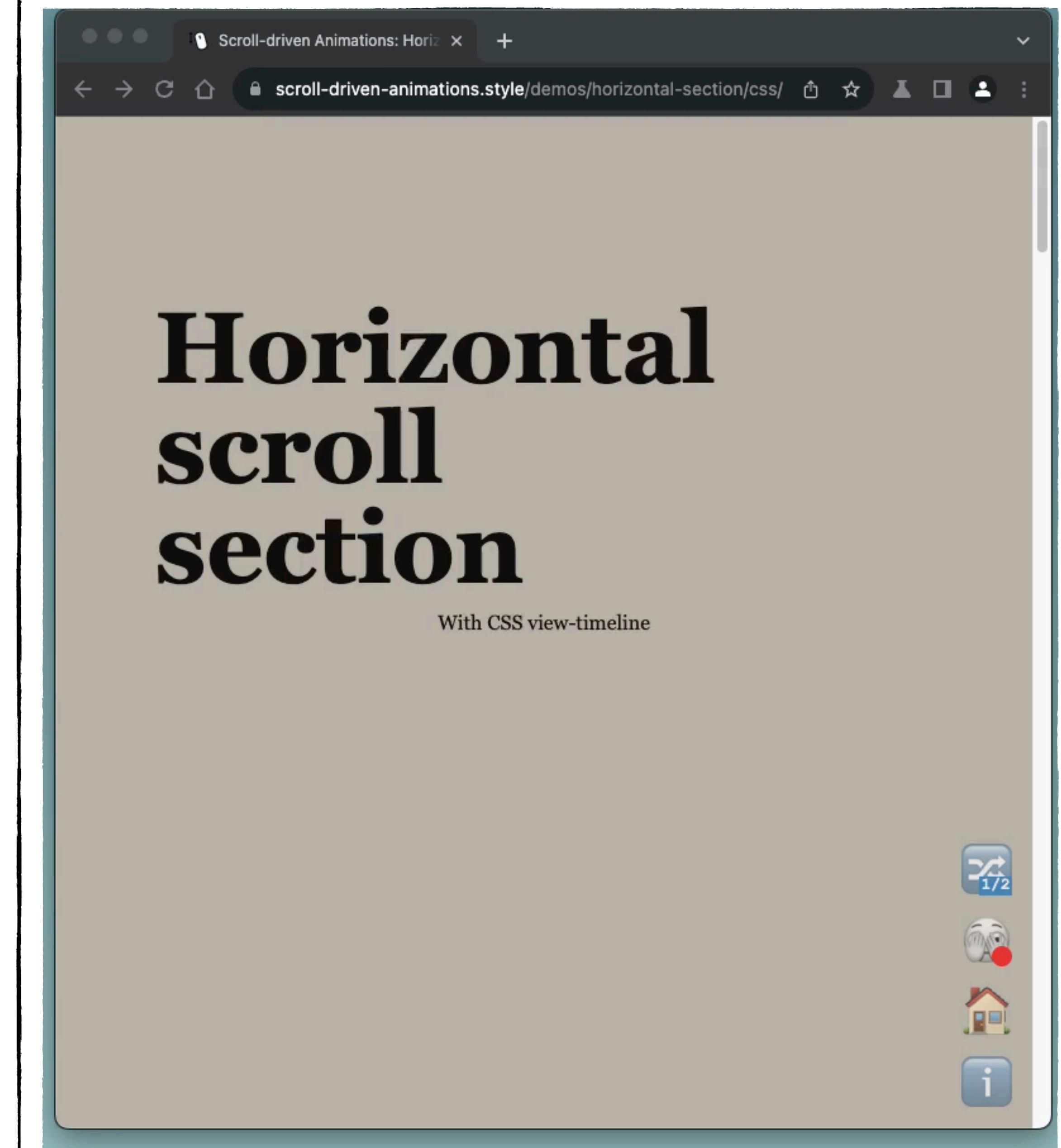
```
1 @keyframes parallax {
2   from { transform: translateY(-5%); }
3
4   to { transform: translateY(-200%); }
5 }
6
7 @keyframes parallaxInverse {
8   from { transform: translateY(150px); }
9
10  to { transform: translateY(1000px); }
11 }
```

```
1 .hero__body img {
2   will-change: transform;
3   animation: 1s linear forwards parallax;
4
5   animation-timeline: scroll(block root);
6 }
7
8 .hero__header {
9   position: absolute;
10  top: 0;
11  left: 64px;
12  width: 100%;
13  text-align: left;
14  will-change: transform;
15  animation: 1s linear forwards parallaxInverse;
16
17  animation-timeline: scroll(block root);
18 }
```

More Examples



More Examples



Page Transition

DEMO

Experimental!

Page Transition

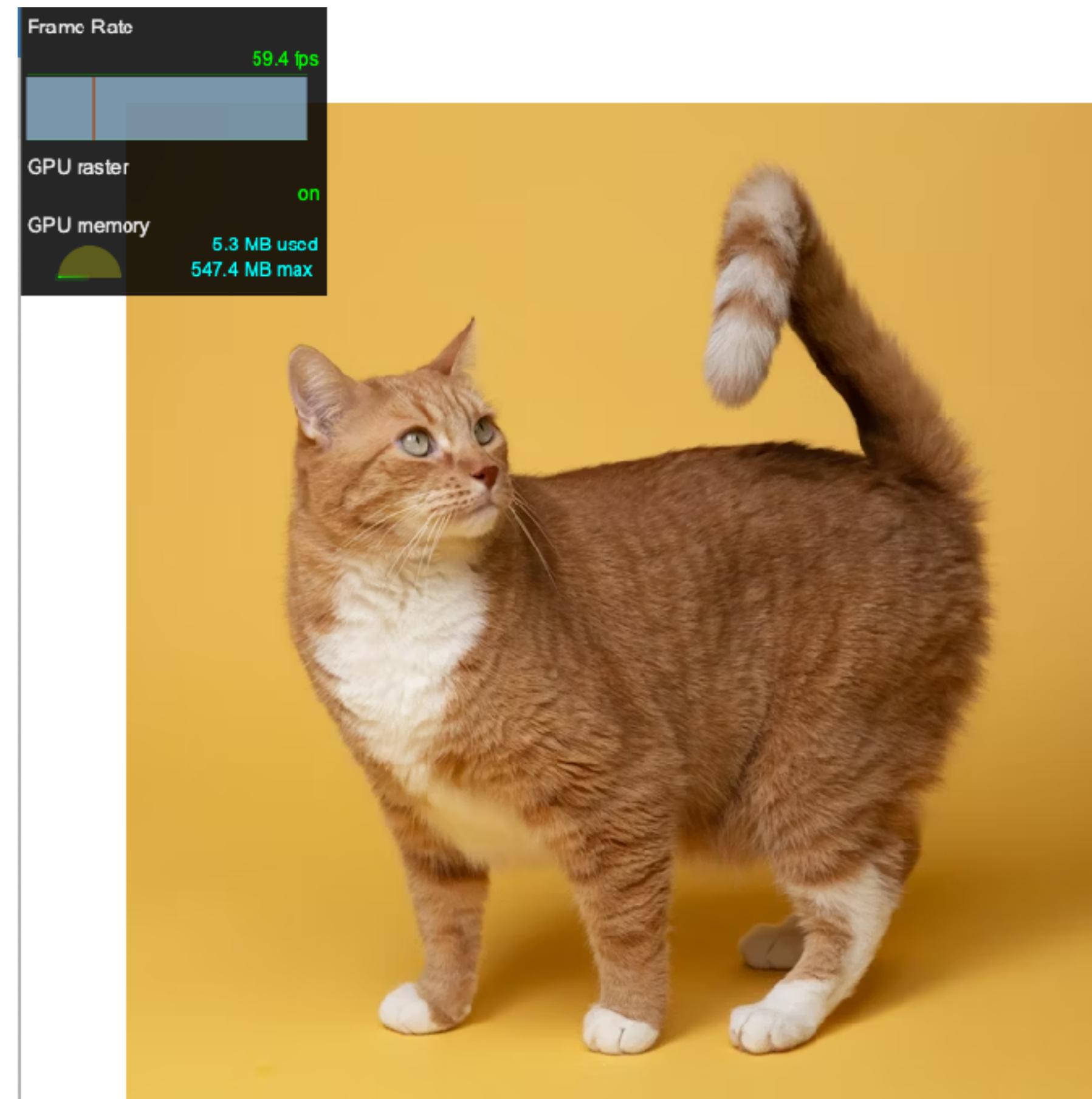
```
1 // general.css
2
3 body {
4   view-transition-name: body;
5 }
6 ::view-transition {
7   background: none;
8 }
9
10 :root {
11   view-transition-name: none;
12 }
13
14 ::view-transition-group(body) {
15   animation-duration: 700ms;
16 }
17
18
```

```
1 // general.css
2
3 @keyframes shrink {
4   to {
5     scale: 0;
6     opacity: 0;
7   }
8 }
9
10 @keyframes grow {
11   from {
12     scale: 0;
13     opacity: 0;
14   }
15 }
16
17
18
```

```
1 // page-a.css
2
3 ::view-transition-old(body) {
4   animation-name: shrink;
5 }
6
7 ::view-transition-new(body) {
8   animation-name: grow;
9   animation-delay: 0.3s;
10 }
11
12 // page-b.css
13
14 ::view-transition-old(body) {
15   animation-name: shrink;
16 }
17
18 ::view-transition-new(body) {
19   animation-name: grow;
20   animation-delay: 0.3s;
21 }
22
```

Debugging

Rendering - FPS Checker



Miau

When I want in, I want in now!

- Garfield

A screenshot of the Chrome DevTools interface. The top navigation bar has tabs for Elements, Console, Sources, Network, Performance, Memory, Application, Lighthouse, and a settings gear icon. The "Elements" tab is selected. On the right side, there is a sidebar with a "More tools" dropdown menu open, showing options like Animations, Autofill, Changes, Coverage, CSS overview, Developer resources, Issues, Layers, Media, Memory inspector, Network conditions, Network request blocking, Performance insights, Performance monitor, Quick source, Recorder, Rendering, Search, Security, Sensors, WebAudio, WebAuthn, and What's new. The main content area shows the page's HTML structure under the "Elements" tab, with the "body" element selected. Below the HTML view, there is a "Rendering" tab with several checkboxes: "Paint flashing" (checked), "Layout Shift Regions" (unchecked), "Layer borders" (unchecked), "Frame Rendering Stats" (checked), "Scrolling performance issues" (unchecked), "Highlight ad frames" (unchecked), "Core Web Vitals" (unchecked), "Disable local fonts" (unchecked), "Emulate a focused page" (unchecked), "Enable automatic dark mode" (unchecked), and "Emulate CSS media feature prefers-color-scheme" (unchecked). The status bar at the bottom right of the DevTools window says "user agent stylesheet".

Animations



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A screenshot of the Chrome DevTools interface. The top navigation bar shows tabs for Elements, Console, Sources, Network, Performance, Memory, Application, Lighthouse, and a settings/closer icon. The 'Elements' tab is active. Below the tabs is a code editor showing the HTML structure of a page. A context menu is open over the 'body' element, with 'Animations' highlighted. The main pane below shows the 'Animations' tab selected in the DevTools sidebar. The sidebar also lists other tools like Autofill, Changes, Coverage, CSS overview, Developer resources, Issues, Layers, Media, Memory inspector, Network conditions, Network request blocking, Performance insights, Performance monitor, Quick source, Recorder, Rendering, Search, Security, Sensors, WebAudio, WebAuthn, and What's new. A tooltip at the bottom right says 'Select an animation to modify.' The bottom of the screen shows the user agent stylesheet and a small preview window.

A11Y

A11Y - Prefers Reduced Motion

```
1 // general.css
2
3 @media (prefers-reduced-motion: reduce) {
4   ::view-transition-group(page) {
5     animation-duration: 0s;
6   }
7
8   .container {
9     animation-duration: 0s;
10  }
11
12  .container img {
13    transition-duration: 0s;
14  }
15 }
16
```

Thank you <3



@vlad_stawizki



@vlad-stawizki



@VladStawizki





do your thing